PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Gold et. al
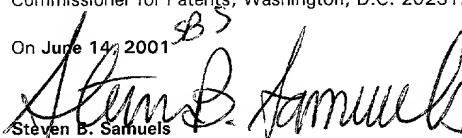
Serial No.: **09/851,795**   Group Art Unit: **Not Assigned yet**

Filed: **May 9, 2001**   Examiner: **Not Assigned yet**

For: **SYSTEM AND METHOD FOR HARDWARE ASSISTED SPINLOCK**

Assistant Commissioner
for Patents
Washington, D.C. 20231

Dear Sir:

PRELIMINARY AMENDMENT

Preliminary to examination of the above-captioned application, please amend the application as follows.

IN THE SPECIFICATION:

On page 1, at line 15 of the specification as originally filed, before "FIELD OF THE INVENTION", please insert the following new paragraph:

-- CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority of U.S. Provisional Application Serial No. 60/254,837 entitled "System And Method For Hardware Assisted Spinlock", filed December 12, 2000, which is hereby incorporated by reference in its entirety.--

IN THE CLAIMS:

Please amend claims 6, 7, 18 and 19 as follows:

6. (Amended) The multiple processor computer system of claim 5 wherein the queue comprises a plurality of entries, each entry comprising a first data field for containing a processor identification, a second data field for containing a lock request time, and a third data field for containing a priority of a request for a lock.

7. (Amended) The multiple processor computer system of claim 6 wherein each request for a lock on the shared resource has a corresponding entry in the queue, and wherein the crossbar structure determines which request is granted the lock based at least in part upon the respective priorities contained in the third data fields of the queue entries for each request.

18. (Amended) The crossbar structure of claim 17 wherein the queue comprises a plurality of entries, each entry comprising a first data field for containing a processor identification, a second data field for containing a lock request time, and a third data field for containing a priority of a request for a lock.

19. (Amended) The crossbar structure of claim 18 wherein each request for a lock on the shared resource has a corresponding entry in the queue, and wherein the crossbar structure determines which request is granted the lock based at least in part upon the respective priorities contained in

the third data fields of the queue entries for each request.

Please add the following new claims 48-52:

48. (Newly added)   The multiple processor computer system of claim 7 wherein if the third data fields of more than one of the queue entries contains the same and highest priority, the crossbar structure further determines which request is granted the lock based upon the respective lock request times contained in the second data fields of those queue entries.

49. (Newly added)   The crossbar structure of claim 19 wherein if the third data fields of more than one of the queue entries contains the same and highest priority, the crossbar structure further determines which request is granted the lock based upon the respective lock request times contained in the second data fields of those queue entries.

50. (Newly added) The method of claim 24 wherein determining a processor further comprises:

reading at least one priority field and a processor identification corresponding to each priority field, from the queue;

determining that more than one priority field contains the same and highest priority;

reading a time field corresponding to each priority field containing the same and highest priority;

determining a processor based on the processor identification corresponding the earliest time in the time fields; and

granting the lock to the determined processor corresponding to the earliest time in the time fields.

51. (Newly added) The method of claim 36 wherein determining a processor further comprises:

reading at least one priority field and a processor identification corresponding to each priority field, from the queue;

determining that more than one priority field contains the same and highest priority;

reading a time field corresponding to each priority field containing the same and highest priority;

determining a processor based on the processor identification corresponding the earliest time in the time fields; and

granting the lock to the determined processor corresponding to the earliest time in the time fields.

52. (Newly added) The method of claim 46 wherein determining a processor further comprises:

reading at least one priority field and a processor identification corresponding to each priority field, from the queue;

determining that more than one priority field contains the same and highest priority;

reading a time field corresponding to each priority field containing the same and highest priority;

determining a processor based on the processor identification corresponding the earliest time in the time fields; and
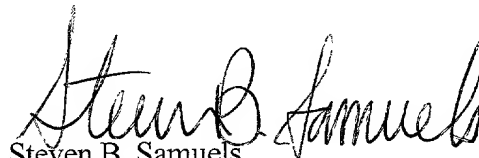
granting the lock to the determined processor corresponding to the earliest time in the time fields.

REMARKS

Applicants have amended the specification to include information concerning the claim of priority to U.S. Provisional Application No. 60/254,837. Further, Applicants have amended claims 6, 7, 18, and 19 and have added new claims 48 - 52. Support for new claims 48 - 52 is provided at page 11, lines 1-6 and elsewhere in the specification. No new matter has been added. The claims have been amended, and new claims added, in order to more fully claim the breadth and scope of the subject matter that Applicants believe to be their invention and which they desire to claim, and are not made to overcome any prior art.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

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Date: June 14, 2001

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 6, 7, 18, and 19 have been amended as follows:

6. (Amended) The multiple processor computer system of claim 5 wherein the queue comprises a plurality of entries, each entry comprising a first data field for containing a processor identification, a second data field for containing a lock request time, and a third data field for containing a priority of a [task requesting] request for a lock.

7. (Amended) The multiple processor computer system of claim 6 wherein each request for a lock on the shared resource has a corresponding entry in the queue, and wherein the crossbar structure [queue] determines which [processor] request is granted [a] the lock based [on the lock request time and] at least in part upon the respective priorities contained in the third data fields of the queue entries for each request [the priority of the task requesting the lock].

18. (Amended) The crossbar structure of claim 17 wherein the queue comprises a plurality of entries, each entry comprising a first data field for containing a processor identification, a second data field for containing a lock request time, and a third data field for containing a priority of a [task requesting] request for a lock.

19. (Amended) The crossbar structure of claim 18 wherein each request for a lock on the shared resource has a corresponding entry in the queue, and wherein the crossbar structure [queue] determines which [processor] request is granted [a] the lock based [on the lock request time and] at least in part upon the respective priorities contained in the third data fields of the queue entries for each request [the priority of the task requesting the lock].